Workflow discovery exercise
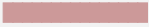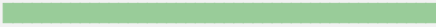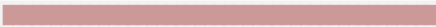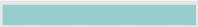
Your background

Name			Response Percent	Response Total
				16
Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.				

Institute			Response Percent	Response Total
				16
Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.				

Email address			Response Percent	Response Total
				16
Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.				

Please select your position(-s)		Response Percent	Response Total
Researcher		50%	8
Developer		25%	4
PhD in Bioinformatics student		18.8%	3
Laboratory head		6.2%	1
Other		25%	4
	Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.		

Please select what your background is in		Response Percent	Response Total
Biology		56.2%	9
Chemistry		12.5%	2
Computer Science		56.2%	9
Physics		0%	0
Mathematics		6.2%	1
Other		25%	4
	Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.		

Exercise feedback

How long did it take you to solve the exercises?		Response Percent	Response Total
Less than 90 minutes		18.8%	3
90-120 minutes		25%	4
121 - 150 minutes		37.5%	6
151 - 180 minutes		12.5%	2
181 - 210 minutes		6.2%	1
211 - 240 minutes		0%	0
More than 240 minutes		0%	0
	Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.		

Did you find the workflow diagrams readable?		Response Percent	Response Total
Yes		87.5%	14
Not always, especially:		12.5%	2
	Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.		

Could the diagram contents or layout be improved to help discovery or editing?		Response Percent	Response Total
			11
	Total # of respondents **16**. Statistics based on **11** respondents; **0** filtered; **5** skipped.		

Please indicate below the order in which you solved an exercise by assigning a number to a step (e.g. "1" to "I read the task description"). Not all steps will be relevant. If you did extra steps, please write them down under the next question.

	1	2	3	4	5	Response Total
* I looked what "my" workflow (i.e. the one to be adapted) did.	21.4% (3)	78.6% (11)	0% (0)	0% (0)	0% (0)	14
* I read the task description.	100% (13)	0% (0)	0% (0)	0% (0)	0% (0)	13
* I decided on the relevance of one candidate workflow and then edited it accordingly immediately after this. I then did the same for the other candidate workflows.	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	2
* I decided on the relevance of all candidate workflows in one step.	0% (0)	25% (2)	62.5% (5)	12.5% (1)	0% (0)	8
* I edited those candidate workflows I had marked as relevant.	0% (0)	0% (0)	33.3% (3)	66.7% (6)	0% (0)	9
* I started completing the feedback form as soon as I finished one candidate workflow.	0% (0)	0% (0)	0% (0)	20% (1)	80% (4)	5
* I completed the feedback form after all the discovery and editing work.	0% (0)	10% (1)	10% (1)	60% (6)	20% (2)	10
* I scanned all candidate workflows first for relevance, and then did the editing in a separate step.	0% (0)	12.5% (1)	75% (6)	12.5% (1)	0% (0)	8

Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.

Please describe any additional steps you may have done.		Response Percent	Response Total
			6

Total # of respondents **16**. Statistics based on **6** respondents; **0** filtered; **10** skipped.

Please indicate which of the below information sources you used, and how much, to decide whether a workflow was relevant or not (step A) in case all descriptions were available.

	Always 1.	2.	Often 3.	4.	Sometimes 5.	6.	Rarely 7.	Response Total
the diagram	81.2% (13)	0% (0)	12.5% (2)	0% (0)	0% (0)	6.2% (1)	0% (0)	16
the workflow name	6.2% (1)	0% (0)	31.2% (5)	0% (0)	18.8% (3)	0% (0)	43.8% (7)	16
the overall workflow description	20% (3)	6.7% (1)	40% (6)	0% (0)	6.7% (1)	6.7% (1)	20% (3)	15
the workflow input descriptions	25% (4)	12.5% (2)	37.5% (6)	6.2% (1)	18.8% (3)	0% (0)	0% (0)	16
the workflow output descriptions	25% (4)	12.5% (2)	37.5% (6)	6.2% (1)	18.8% (3)	0% (0)	0% (0)	16
the service descriptions	25% (4)	0% (0)	43.8% (7)	6.2% (1)	6.2% (1)	18.8% (3)	0% (0)	16

Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.

Please indicate which of the below information sources you used, and how much, to decide how to edit a workflow (step B), in case all descriptions were available.

	Always 1.	2.	Often 3.	4.	Sometimes 5.	6.	Rarely 7.	Response Total
the diagram	81.2% (13)	0% (0)	6.2% (1)	0% (0)	0% (0)	6.2% (1)	6.2% (1)	16
the workflow name	0% (0)	6.2% (1)	18.8% (3)	0% (0)	6.2% (1)	0% (0)	68.8% (11)	16
the overall workflow description	6.2% (1)	12.5% (2)	25% (4)	0% (0)	12.5% (2)	6.2% (1)	37.5% (6)	16
the workflow input descriptions	50% (8)	6.2% (1)	18.8% (3)	6.2% (1)	12.5% (2)	6.2% (1)	0% (0)	16
the workflow output descriptions	50% (8)	6.2% (1)	18.8% (3)	6.2% (1)	12.5% (2)	6.2% (1)	0% (0)	16
the service descriptions	43.8% (7)	12.5% (2)	12.5% (2)	18.8% (3)	6.2% (1)	6.2% (1)	0% (0)	16
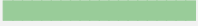
Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.

Finally, if you have any other feedback to give us, let us know here.	Response Percent	Response Total
		4

Total # of respondents **16**. Statistics based on **4** respondents; **0** filtered; **12** skipped.
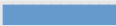
Workflow experience
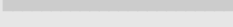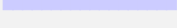
How many workflows have you built to date using the Taverna workflow editor?	Response Percent	Response Total
0	25%	4
1	0%	0
2-5	25%	4
6-10	6.2%	1
11-25	6.2%	1
25+	37.5%	6
Total # of respondents **16**. Statistics based on **16** respondents; **0** filtered; **0** skipped.		

What tasks do your workflows cover?	Response Percent	Response Total
Sequence analysis	61.5%	8
Genome annotation	30.8%	4
Computational evolutionary biology	15.4%	2
Measuring biodiversity	7.7%	1
Analysis of gene expression	30.8%	4
Analysis of regulation	0%	0
Analysis of protein expression	7.7%	1
Analysis of mutations in cancer	0%	0
Prediction of protein structure	0%	0
Comparative genomics	30.8%	4
Modeling biological systems	23.1%	3
High-throughput image analysis	0%	0
Protein-protein docking	7.7%	1
Other	38.5%	5
Total # of respondents **16**. Statistics based on **13** respondents; **0** filtered; **3** skipped.		

What tasks would you like to be able to solve, given that appropriate sources and tools existed, that may not currently exist?		Response Percent	Response Total
			8
		Total # of respondents **16**. Statistics based on **8** respondents; **0** filtered; **8** skipped.	

How many services does your largest workflow count?		Response Percent	Response Total
2-5		16.7%	2
6-10		41.7%	5
11-25		33.3%	4
25+		8.3%	1
		Total # of respondents **16**. Statistics based on **12** respondents; **0** filtered; **4** skipped.	

How many people did you work with (or had to contact) to build your most complex workflow?		Response Percent	Response Total
0		38.5%	5
1		15.4%	2
2-5		38.5%	5
6-10		7.7%	1
11-25		0%	0
25+		0%	0
		Total # of respondents **16**. Statistics based on **13** respondents; **0** filtered; **3** skipped.	

Workflow sharing and re-use

How do you find workflows?		Response Percent	Response Total
I don't - I start from scratch		30.8%	4
Google		7.7%	1
The specialised www.myexperiment.org/google		0%	0
myExperiment.org		23.1%	3
Word of mouth		30.8%	4
Publications		0%	0
Other		30.8%	4
Total # of respondents **16**. Statistics based on **13** respondents; **0** filtered; **3** skipped.			
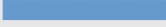
I have the following worries about sharing my workflow on myExperiment.org		Response Percent	Response Total
Receiving proper acknowledgements for my work		46.2%	6
It does the job, but it is not a piece of software I am very proud of		30.8%	4
Being scooped (i.e. beat to obtaining results) by my own doing		15.4%	2
Sharing the data that feeds into the workflows		0%	0
Sharing the data that is obtained from the workflows		0%	0
I would be more comfortable if others could use my workflow without knowing how it works exactly		7.7%	1
Other		38.5%	5
Total # of respondents **16**. Statistics based on **13** respondents; **0** filtered; **3** skipped.			

I have re-used other people's workflows before	Response Percent	Response Total
Yes	60%	9
No	40%	6
Total # of respondents **16**. Statistics based on **15** respondents; **0** filtered; **1** skipped.		

In case you have re-used other people's workflows, who was the workflow by?	Response Percent	Response Total
Research group member	33.3%	3
Colleague at my institute	22.2%	2
Project collaborator	11.1%	1
Third party	44.4%	4
Total # of respondents **16**. Statistics based on **9** respondents; **0** filtered; **7** skipped.		

Please rate to what extent the following statements apply when you try workflow re-use

	Always 1.	2.	Often 3.	4.	Sometimes 5.	6.	Rarely 7.	Response Total
I believe there are not enough workflows around, so I don't look	0% (0)	8.3% (1)	41.7% (5)	0% (0)	0% (0)	25% (3)	25% (3)	12
There are no effective search tools to find relevant workflows	30.8% (4)	15.4% (2)	15.4% (2)	23.1% (3)	7.7% (1)	7.7% (1)	0% (0)	13
I have no way of knowing whether to trust the performed analysis	25% (3)	16.7% (2)	16.7% (2)	8.3% (1)	16.7% (2)	16.7% (2)	0% (0)	12
I do not have enough documentation to understand the workflow	28.6% (4)	0% (0)	35.7% (5)	21.4% (3)	14.3% (2)	0% (0)	0% (0)	14
Some services used are local to the author, so not re-usable	8.3% (1)	0% (0)	33.3% (4)	16.7% (2)	25% (3)	0% (0)	16.7% (2)	12
Some services used are down	28.6% (4)	28.6% (4)	7.1% (1)	28.6% (4)	7.1% (1)	0% (0)	0% (0)	14

Total # of respondents **16**. Statistics based on **14** respondents; **0** filtered; **2** skipped.